

- The method of claim 7 comprising the step of extracting the documents from the envelopes.
- 9. The method of claim 8 comprising the steps of conveying the extracted documents along a document path to a sorter for sorting the extracted documents into one of a plurality of bins.
- 10. The method of claim 8 comprising the step of scanning the documents to determine the orientation of the extracted documents.
- 11. The method of claim 8 comprising the step of separating the extracted documents and serially conveying the documents along a document path.
- 12. The method of claim 7 wherein the steps of feeding the leading envelope and controlling the feeding of the trailing envelope comprise serially feeding the leading and trailing envelopes from a stack of envelopes in the input bin.
- 13. The method of claim 7 comprising the steps of conveying the envelopes to a cutter for cutting the envelopes open.

April 7

An apparatus for processing documents, comprising:

an envelope opener operable to open envelopes containing at least four

documents;

an extractor operable to extract documents from the opened envelopes; and a singulator operable to receive four extracted documents in face-to-face

relation and serially feed the documents along a document path.

15. The apparatus of claim 14 comprising a system transport for conveying documents from the extractor to the singulator.

- 16. The apparatus of claim 14 comprising a sorter for receiving documents from the singulator and sorting the documents into a plurality of bins.
- 17. The apparatus of claim 14 comprising a system controller operable to control the flow of envelopes and documents to ensure that documents from one envelope do not interfere with documents from a second envelope.
- (1) 2
- 18. The apparatus of claim 14 wherein the singulator comprises a first roller urging the extracted documents rearwardly and a second roller urging the extracted documents forwardly.
- 19. The apparatus of claim 14 comprising a feeder for serially feeding envelopes from a stack of envelopes.
- 20. An apparatus for processing documents, comprising:
  - a system transport operable to convey documents along a path in face-toface relation; and
  - a singulator operable to separate the documents and serially feed the documents along the path, comprising:
    - a first roller selectively driving the documents forwardly along the path; and
    - a second roller selectively driving the documents rearwardly along the path.
- 21. The apparatus of claim 20 wherein the first and second rollers form a nip for receiving documents.
- 22. The apparatus of claim 20 comprising a plurality of pre-feed rollers urging the documents toward the first and second rollers while the documents are in the singulator.

- 23. The apparatus of claim 20 comprising a stiffener supporting the documents in the singulator to prevent the documents from buckling.
- 24. The apparatus of claim 20 comprising a first clutch for selectively engaging the first roller with a drive source to drive the first roller.
- 25. The apparatus of claim 24 comprising a second clutch for selectively engaging the second roller with the drive source to drive the second roller.
- 26. The apparatus of claim 20 wherein the first and second rollers have engagement surfaces for engaging the documents, and the first roller engagement surface has a coefficient of friction that is higher than the coefficient of friction of the second roller engagement surface.
- 27. A method for processing envelopes containing contents, comprising the steps of: providing a stack of envelopes containing contents; serially feeding the envelopes along an envelope path; scanning the envelopes to detect a characteristic of the envelopes; opening envelopes having a first detected characteristic; extracted the contents from envelopes having the first detected characteristic; singulating the contents from envelopes having the first detected characteristic;

opening envelopes having a second detected characteristic; extract the contents from envelopes having the second detected characteristic; and

sorting the contents from envelopes having the second detected characteristic to an output bin without singulating the contents.

28. The method of claim 27 wherein the step of scanning the envelopes comprises measuring the thickness of the envelopes.

- 29. The method of claim 28 wherein the first detected characteristic is a thickness within a first range.
- 30. The method of claim 29 wherein the second detected characteristic is a thickness within a second range.
- 31. The method of claim 30 wherein the thicknesses in the second range are greater than the thicknesses in the first range.
- 32. The method of claim 27 comprising sorting the singulated contents from envelopes having the second detected characteristic into a plurality of output bins.
- 33. A method for processing envelopes containing contents, comprising the steps of:
  - severing a document into first and second portions while the document is in an envelope;
  - extracting the first and second document portions from the envelope; and singulating the first and second document portions.
- 34. The method of claim 33 comprising the step of sorting the first and second document portions into one or more output bins.
- 35. The method of claim 33 comprising the step of feeding the envelope from a stack of envelopes in an input bin.
- 36. The method of 33 comprising the step of reuniting the first and second document portions.
- 37. The method of claim 36 wherein the step of reuniting comprises sorting the first and second document portions on top of one another in an output bin.

38. The method of claim 36 wherein the step of reuniting comprises scanning the first and second document portions to obtain the image data for the two portions and correlating the image data for the two portions.

Sub DI>

- The method of claim 36 wherein the step of correlating the image data comprises combining the image data for the two portions into a single image data file.
- 40. The method of claim 33 comprising extracting an unsevered second document from the envelope.

 $Q^{T}$ 

- 41. A method for processing documents, comprising the steps of:
  - conveying a plurality of documents extracted from an envelope in face-to-face relation into a nip formed between a first roller and a second roller;
  - driving the first roller and the second roller so that the first roller urges a first one of the documents forwardly and the second roller urges a second one of the documents rearwardly;
  - advancing the first document forwardly out of the nip while the second document remains in the nip;
  - disengaging the first roller from a drive source after the first document is advanced a pre-determined distance; and re-engaging the first roller with the drive source.
- 42. The method of claim 41 comprising the step of disengaging the second roller from the drive source after the first document is advanced forwardly from the nip.
- The method of claim 41 comprising the step of driving the first roller rearwardly after the first document is advanced away from the nip.

Patent Application No. 09/542,418

- 44. The method of claim 41 comprising the step of driving a third roller so that the third roller urges the documents forwardly while the documents are engaged in the nip.
- 45. The method of claim 41 comprising the step of extracting the documents from the envelope.

- 46. The method of claim 41 comprising the step of sorting the documents into one or more output bins.
- 47. The method claim 41 comprising the step of supporting the documents to prevent the documents from buckling while the documents are engaged in the nip.

Respectfully submitted,

DANN, DORFMAN, HERRELL & SKILLMAN A Professional Corporation Attorneys for Applicant(s)

Stephen H. Eland

PTO Registration No. 41,010

Telephone: (215) 563-4100 Facsimile: (215) 563-4044

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)** 

I hereby certify that this Response and accompanying papers are being deposited on April 25, 2001 with the United States Postal Service as first-class mail in an envelope properly addressed to COMMISSIONER OF PATENTS AND TRADEMARKS, Washington, DC 20231

April 25, 2001 **Date of Certificate** 

Stephen H. Eland PTO Registration No. 41,010